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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,564	09/14/2001	Sakae Matsumoto	XA-9544	7144

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MILES & STOCKBRIDGE PC  
1751 PINNACLE DRIVE  
SUITE 500  
MCLEAN, VA 22102-3833

EXAMINER

VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
3682	

3682

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/936,564	<b>Applicant(s)</b> MATSUMOTO ET AL.	
	<b>Examiner</b> Bradley J Van Pelt	<b>Art Unit</b> 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 12 January 2005.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-22 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-22 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some \*    c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiu et al. (USPN 5,640,884) in view of Castellon (USPN 5,464,251), and Fujiu et al. (USPN 6,099,036).

Fujiu et al. '884 disclose a collapsible shaft assembly comprising: an inner shaft (3) having a fitting portion; an outer hollow shaft having a fitting portion fitted on said fitting portion of said inner shaft such that said inner shaft and said outer shaft are telescopically movable in an axial direction in response to an impact force, and incapable of rotating relative to each other; concave grooves (7) formed in said fitting portion of said inner shaft; filling holes (1b), formed in said fitting portion of said outer shaft, through which said concave grooves are filled with a resin resinous slide portions thus being formed on said fitting portions of said inner and outer shafts; and a one piece, substantially annular low frictional member (6) fixedly attached to an inner peripheral surface of a front side end of said fitting portion of said outer shaft (see column 3, lines 50-62);

said inner shaft having a reduced diameter portion extending from said fitting portion thereof in a direction of collapse of said outer shaft relative to said inner shaft, said outer shaft having an end portion extending beyond said fitting portion of said inner shaft so as to receive said reduced diameter portion of said inner shaft;

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low frictional member is constructed of a ring made of a synthetic resin (see column 3 lines 50-62);

low frictional member is axially fixed to said end portion of said outer shaft;

low frictional member is a resin member;

resin member is axially fixed to an inner periphery of said end portion of said outer shaft;

resin member is substantially annular;

fitting portions are connected to each other by a resin connecting portion;

resin connection portion is formed in a groove in said fitting portion of said inner shaft and an adjacent hole of said fitting portion of said outer shaft.

Fuji et al. '884 do not disclose a radial clearance to an outer peripheral surface of said inner race; a substantially annular recess formed in said inner peripheral surface wherein said low frictional member is axially fixed in said recess; said low frictional member is a pre-formed member which is inserted into said front side end of said fitting portion.

Castellon shows a radial clearance to an outer peripheral surface of said inner race (see fig. 2, hoop 11); a substantially annular recess (12) formed in said inner peripheral surface wherein said low frictional member is axially fixed in said recess; said low frictional member is a pre-formed member which is inserted into said front side end of said fitting portion (see fig. 3).

Fuji et al. '036 disclose a plurality of concave groove at locations which are axially spaced from each other and from a front side end of said outer shaft.

To modify the apparatus of Fuji et al. 884' so as to provide a radial clearance, a recess in the inner peripheral surface, and to pre-form the low friction member would have been obvious

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to one of ordinary skill in the art at the time the invention was made in view of the teachings of Castellon that such an arrangement improves the ease of manufacturing the steering column.

To modify the apparatus of Fuji et al. 884' so as to provide a plurality of concave grooves would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the teachings of Fujii et al. '036 that such an arrangement increases the shearing force.

### *Response to Arguments*

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. The applicant argues that it is not clear that the Castellon reference discloses a radial clearance. Claim 1 reads as follows: "annular low frictional member fixedly attached to an inner peripheral surface of said front side end of said outer shaft, and with radial clearance to an outer peripheral surface of said inner shaft." The claim does not specify if the inner peripheral surface and the outer peripheral surface or the low frictional member and the outer peripheral surface has the radial clearance. The Castellon reference shows the inner peripheral surface has a radial clearance with the outer surface of the shaft. Also since Castellon indicates that the inner member 1 is slidable with respect to the outer hoop 11, there must be some radial clearance. Furthermore, if applicant's low friction member 6 is distinguishable from Castellon's outer hoop 11 in that it never touches the shaft 1 especially during the collapse phase, what could be its purpose?

### *Conclusion*

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is 703.305.8176. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJVP 

  
MARGIE CHARLES  
PATENT EXAMINER  
March 30, 2005